REMARKS/ARGUMENTS

Claims 1-40 are pending in the present application.

This Amendment is in response to the Office Action mailed February 1, 2008. In the Office Action, the Examiner objected to claim 33, rejected claims 23-33 under 35 U.S.C. §101; claims 1-8, 10, 12-19, 21, 23-30, 32, and 34-39 under 35 U.S.C. §102(b); and claims 9, 11, 20, 22, 31, 33, and 40 under 35 U.S.C. §103(a). Applicant has amended claims 1, 10, 12, 21, 23, 25-28, 32-34, and 39. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Claim Objections

The Examiner objects to claim 33 because of minor informalities. Applicant has amended claim 33 accordingly. Applicant respectfully requests that the Examiner withdraw the objection to claim 33.

Rejection Under 35 U.S.C. § 101

In the Office Action, the Examiner rejected claims 23-33 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Although Applicant disagrees with the Examiner's characterization of the claim language, in the interest of expediting prosecution of the application, Applicant has amended claims 23 and 32 to recite "storage medium".

The Examiner suggested Applicant to delete in the specification all sections defining the computer readable medium as a "signal" or "carrier wave", etc. (Office Action, page 3, lines 6-8). Applicant respectfully disagrees. A rejection on the basis of the written description should be addressed under 35 U.S.C. §112, and not 35 U.S.C. §101. Furthermore, the Examiner has not shown that persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claim. To satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. *Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1319, 66 USPQ2d 1429, 1438 (Fed. Cir. 2003). There is a strong presumption that an adequate written description of the claimed invention is

present when the application is filed. *In re Wertheim*, 541 F.2d 257, 263, 191 USPQ 90, 97 (CCPA 1976). The PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claim. Here, the Examiner has not met the burden of showing that persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claim.

Accordingly, Applicant respectfully requests the rejection of claims 23-33 be withdrawn.

Rejection Under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 1-8, 10, 12,-19, 21, 23-30, 32, and 34-39 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 7,103,669B2 issued to Apostolopoulos ("Apostolopoulos"). Applicant respectfully traverses the rejection and submits that the Examiner has not met the burden of establishing a prima facie case of anticipation.

Apostolopoulos discloses a video communication method and system employing multiple state encoding and path diversity. A system is composed of two jointly designed subsystems: (1) multiple state video coding system and (2) path diversity transmission system (Apostolopoulos, col. 3, lines 52-54). A multiple state video encoder 114 for generating at least two independently decodable packet streams in response to an original video stream and a path selector 118 for explicitly sending each packet stream over a different path through the network 130 (Apostolopoulos, col. 5, lines 45-49; Fig. 1). The multiple state video encoder 114 receives original video 115 and encodes the video 115 in this example into three independently decodable packet streams 116 by employing multiple state encoding with three states (Apostolopoulos, col. 5, lines 50-52; Fig. 1). The multiple state video encoder may be replaced by a multiple description video coder. Specifically, a multiple description video coder is a coder, which codes the original video into a number of streams, where each stream is independently decodable from the other streams (Apostolopoulos, col. 9, lines 40-44; Fig. 3). A state recovery block 526 selects past and future frames to be used in recovering a lost frame while taking into account scene changes (Apostolopoulos, col. 11, line 66 – col. 12, line 2; Fig. 6).

Apostolopoulous does not disclose, either expressly or inherently, at least one of: (1) a receiver to receive a default stream and N restart sub-streams from a transmitter over a transmission path, N being an integer equal to at least 1 and selected according to a selection, the

default stream being coded by a multiple description (MD) coding, the N restart sub-streams being coded by a predictive coding and sampled according to a sampling pattern, the default and N restart sub-streams corresponding to a media content, at least one of the N restart sub-streams restarting the media content when there is a restart condition; and (2) a selector coupled to the receiver to select a receiving frame from the default stream and one of the N restart sub-streams according to a loss status in the default stream; or (3) a transmitter to transmit a default stream and N restart sub-streams to a plurality of receivers over a plurality of transmission paths, N being an integer equal to at least 1 and selected according to a selection at the receivers, the default stream being coded by a multiple description (MD) coding, the N restart sub-streams being coded by a predictive coding and sampled according to a sampling pattern, the default and N restart sub-streams corresponding to a media content, at least one of the N restart sub-streams restarting the media content when there is a restart condition.

First, Apostolopoulos merely discloses a coder or encoder (Apostolopoulos, col. 5, lines 45-52; Fig. 1; col. 9, lines 40-44; Fig. 3), NOT a receiver to receive a default stream and N restart sub-streams, the default stream being coded by a multiple description (MD) coding, the N restart sub-streams being coded by a predictive coding and sampled according to a sampling pattern. A coder or encoder is used at the transmitter or sender, not at the receiver. In addition, the multiple state video encoder 114 merely includes a frame separate block 312 that separates the original video frames 115 into, for example, a series of odd video frames 350 and a series of even video frames 352 (Apostolopoulos, col. 7, lines 40-44; Fig. 3). It does not provide a default stream and N restart sub-streams. Furthermore, separating video frames into odd and even frames is not the same as multiple description (MD) coding. Moreover, Apostolopoulos merely discloses encoding the video 115 into at least two independently decodable packet streams (Apostolopoulos, col. 5, lines 45-47), not a default stream and N restart sub-streams. The at least two independently decodable packet streams merely correspond to the video 115. They do not provide restart of the content stream when there is a restart condition. To clarify this aspect of the invention, claims 1, 10, 12, 21, 23, 32, 34, and 39 have been amended.

Second, Apostolopoulos merely discloses when an error has been detected, state recovery is performed by employing previous or future frames of correctly decoded frames (Apostolopoulos, col. 7, lines 19-21; Fig. 9), NOT a selector to select a receiving frame from the

default stream and one of the N restart sub-streams according to a loss status in the default stream.   Using previous or future frames of correctly decoded frames is not the same as selecting a receiving frame from the default stream and one of the N re-start sub-streams. In addition, detecting an error merely determining if there is an error in the decoded frame (Apostolopoulos, col. 7, lines 13-14; Fig. 9). It is not equivalent to a loss status in the default stream.

In the Office Action, the Examiner cites col. 7, lines 9-37. However, the cited excerpt does not provide the necessary support. For ease of reference, the cited excerpt is copied below.

> "FIG. 9 a flowchart illustrating the steps performed by multiple state decoder in accordance with one embodiment of the present invention. In step 910, a determination is made whether the received frame is from a first sub-sequence. If so, the packet is decoded in step 914. In step 918, a determination is made whether an error has been detected. If there is no error, the frame is reconstructed (step 920) and merged with other frames (step 930). For example, the decoded odd frames can be merged with the decoded even frames.
>
> **When an error has been detected, state recovery is performed by employing previous or future frames of correctly decoded frames** (step 950). In step 960, the lost frame is estimated. Processing then proceeds to step 930. Optionally, when an error has been detected, steps 940 and 944 may be processed before the state recovery 950. In step 940, a determination is made whether a reduced frame rate is acceptable (e.g., recovering the video stream at one-half the frame rate). If so, in step 944, the video is displayed at the reduced frame rate by using frames from on of the other sub-sequences (e.g., the second sub-sequence). Steps 914 to 960 may be replicated for the processing of each sub-sequence of frames. For example, a packet from the second sub-sequence has a similar processing flow except that in step 944, the reduced frame rate is generated by using the frames from the first subsequence or another sub-sequence that is received without error, and in step 930, the second subsequence of frames is merged with other subsequences (e.g., frames in the first sub-sequence)."
> (Apostolopoulos, col. 7, lines 9-37. Emphasis added.)

As seen from the above excerpt, Apostolopoulos merely discloses when an error has been detected, state recovery is performed by employing previous or future frames of correctly decoded frames (Apostolopoulos, col. 7, lines 19-21). Furthermore, reducing the frame rate has nothing to do with selecting a frame.

To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Vergegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the…claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989). Since the Examiner failed to show that Apostolopoulos teaches or discloses any one of the above elements, the rejection under 35 U.S.C. §102 is improper.

The Examiner bears the burden of presenting at least a prima facie case of anticipation. *In re King*, 801 F.2d 1324, 1327, 231 USPQ 136, 138-139 (Fed. Cir. 1986); *In re Wilder*, 429 F.2d 447, 450, 166 USPQ 545, 548 (CCPA 1970). Only if that burden is met, does the burden of going forward shift to the applicant. *In re King*, 801 F.2d at 1327, 231 USPQ at 138-139; *In re Wilder*, 429 F.2d at 450, 166 USPQ at 548. Once a prima facie case is established and rebuttal evidence is submitted, the ultimate question becomes whether, based on the totality of the record, the Examiner carried his burden of proof by a preponderance. See *In re Oetiker*, 977 F.2d 1443, 1445. 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If the Examiner fails to establish a prima facie case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Therefore, Applicant believes that independent claims 1, 10, 12, 21, 23, 32, 34, and 39 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §102(a) be withdrawn.

Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 9, 11, 20, 22, 31, 33, and 40 under 35 U.S.C. §103(a) as being unpatentable over Apostolopoulos in view of U.S. Publication No. 2006/0146934 issued to Caglar et al. ("Caglar"). Applicant respectfully traverses the rejection and submits that the Examiner has not met the burden of establishing a prima facie case of obviousness.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *MPEP §2143, p. 2100-126 to 2100-130 (8th Ed., Rev. 5, August 2006).* Applicant respectfully submits that there is no suggestion or motivation to combine their teachings, and thus no *prima facie* case of obviousness has been established.

Furthermore, the Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), stated: "Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined." MPEP 2141. In *KSR International Co. vs. Teleflex, Inc.*, 127 S.Ct. 1727 (2007) (Kennedy, J.), the Court explained that "[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." The Court further required that an explicit analysis for this reason must be made. "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR 127 S.Ct.* at 1741, quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). In the instant case, Applicant respectfully submits that there are significant differences between the cited references and the claimed invention and there is no apparent reason to combine the known elements in the manner as claimed, and thus no *prima facie* case of obviousness has been established.

Apostolopoulos discloses a video communication method and system employing multiple state encoding and path diversity as discussed above.

Caglar discloses video coding. A finer quantizer is used to encode a different picture in an enhancement layer (Caglar, paragraph [0035], lines 5-6). There can be multiple enhancement

layers, each increasing picture resolution over that of the previous layer (<u>Caglar</u>, paragraph [0036], lines 18-20).

 <u>Apostolopoulos</u> and <u>Caglar</u>, taken alone or in any combination, do not disclose or render obvious, at least one of: (1) a receiver to receive a default stream and N restart sub-streams from a transmitter over a transmission path, N being an integer equal to at least 1 and selected according to a selection, the default stream being coded by a multiple description (MD) coding, the N restart sub-streams being coded by a predictive coding and sampled according to a sampling pattern, the default and N restart sub-streams corresponding to a media content<u>, at least one of the N restart sub-streams restarting the media content when there is a restart condition</u>; and (2) a selector coupled to the receiver to select a receiving frame from the default stream and one of the N restart sub-streams according to a loss status in the default stream; or (3) a transmitter to transmit a default stream and N restart sub-streams to a plurality of receivers over a plurality of transmission paths, N being an integer equal to at least 1 and selected according to a selection at the receivers, the default stream being coded by a multiple description (MD) coding, the N restart sub-streams being coded by a predictive coding and sampled according to a sampling pattern, the default and N restart sub-streams corresponding to a media content<u>, at least one of the N restart sub-streams restarting the media content when there is a restart condition</u>; and (4) at least one of the default stream and the N restart sub-streams corresponds to a layered representation of the frames according to an encoding rate, as recited in claims 9, 11, 20, 22, 31, 33, and 40.

 As discussed above, <u>Apostolopoulos</u> does not disclose or render obvious elements (1) – (3) as above. Accordingly, a combination of <u>Apostolopoulos</u> with any other references in rejecting claims 9, 11, 20, 22, 31, 33, and 40, which depend on claims 1, 10, 12, 21, 23, 32, and 39, respectively, is improper.

 Furthermore, <u>Caglar</u> merely discloses multiple enhancement layers, each increasing picture resolution over that of the previous layer (<u>Caglar</u>, paragraph [0036], lines 18-20), not a layered representation of the frames according to an encoding rate. The multiple enhancement layers merely have increasing resolutions. They are not layered representation according to an encoding rate.

The Examiner failed to establish a prima facie case of obviousness and failed to show there is teaching, suggestion, or motivation to combine the references. When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to: (A) The claimed invention must be considered as a whole; (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and (D) Reasonable expectation of success is the standard with which obviousness is determined. *Hodosh v. Block Drug Col, Inc.*, 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986). "When determining the patentability of a claimed invention which combined two known elements, 'the question is whether there is something in the prior art as a whole suggest the desirability, and thus the obviousness, of making the combination.'" *In re Beattie*, 974 F.2d 1309, 1312 (Fed. Cir. 1992), 24 USPQ2d 1040; *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1462, 221 USPQ (BNA) 481, 488 (Fed. Cir. 1984). To defeat patentability based on obviousness, the suggestion to make the new product having the claimed characteristics must come from the prior art, not from the hindsight knowledge of the invention. *Interconnect Planning Corp. v. Feil*, 744 F.2d 1132, 1143, 227 USPQ (BNA) 543, 551 (Fed. Cir. 1985). To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the Examiner to show a motivation to combine the references that create the case of obviousness. In other words, the Examiner must show reasons that a skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the prior elements from the cited prior references for combination in the manner claimed. *In re Rouffet*, 149 F.3d 1350 (Fed. Cir. 1996), 47 USPQ 2d (BNA) 1453. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or implicitly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973. (Bd.Pat.App.&Inter. 1985). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Furthermore, although a prior art device "may be capable of

being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." *In re Mills*, 916 F.2d at 682, 16 USPQ2d at 1432; *In re Fritch*, 972 F.2d 1260 (Fed. Cir. 1992), 23 USPQ2d 1780.

Moreover, the Examiner failed to establish the factual inquires in the three-pronged test as required by the *Graham* factual inquires. There are significant differences between the cited references and the claimed invention as discussed above. Furthermore, the Examiner has not made an explicit analysis on the apparent reason to combine the known elements in the fashion in the claimed invention. Accordingly, there is no apparent reason to combine the teachings of Apostolopoulos and Caglar.

In the present invention, the cited references do not expressly or implicitly disclose any of the above elements. In addition, the Examiner failed to present a convincing line of reasoning as to why a combination of Apostolopoulos and Caglar is an obvious application of error recovery for multicast of multiple description coded video using restart, or an explicit analysis on the apparent reason to combine Apostolopoulos and Caglar in the manner as claimed.

Therefore, Applicant believes that independent claims 1, 10, 12, 21, 23, 32, 34, and 39 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §103(a) be withdrawn.

Conclusion

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

/THINH V. NGUYEN/

Dated: April 28, 2008   By_____
                                Thinh V. Nguyen
                                Reg. No. 42,034
                                Tel.: (714) 557-3800 (Pacific Coast)

12400 Wilshire Boulevard, Seventh Floor
Los Angeles, California 90025